

**Flood Control Project Maintenance
Levee Inspections**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

Reclamation District No. 0900 West Sacramento

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	7.70	11/12/2015 11/12/2015	Pavel Kazi

LM Start	0.00	Rating **	A	Issue No.	6
LM End	0.00	Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Operations & Maintenance Manuals				°
					°
DWR ID	DWR_RD0900_01_s _ 2013_6				
Action/Comments					
Inspector Comments: This LMA has the updated O&M manuals for the district.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	12
LM End	0.00	Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Emergency Supplies & Equipment				°
					°
DWR ID	DWR_RD0900_01_s _ 2013_12				
Action/Comments					
Inspector Comments: This LMA has an adequate amount of sandbags, sand and various flood fight supplies in their possession.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	16
LM End	0.00	Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Flood Preparedness & Training				°
					°
DWR ID	DWR_RD0900_01_s _ 2013_16				
Action/Comments					
Inspector Comments: The crews in this LMA have taken the flood fighting training course provided by DWR.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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Unit No. 01 Sacramento River	Right	7.70	11/12/2015 11/12/2015	Pavel Kazi

LM Start	1.91	Rating **	C	Issue No.	5
LM End	1.99	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2015 USACE Erosion Survey, DRAFT			38.560512 °	38.558998 °
				-121.518376 °	-121.517191 °
DWR ID					

No Photos

Action/Comments					
Inspector Comments: 2007 - Steep levee slope with cobble revetment rolling off the bank and a silty clay toe. 2008 - Plans for setback levee repair currently in the design phase. 2011 - Setback levee under construction. 2013 - Setback levee is constructed, should be finalized in 2014. 2015: Setback levee complete, site is repaired. [2015 Site ID: SAC_57-2_R]					

LM Start	2.00	Rating **	A/W	Issue No.	1
LM End	2.25	Issue Type +	Ma	Location *	CR
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.559202 °	38.555462 °
				-121.517707 °	-121.516297 °
DWR ID	DWR_RD0900_01_s_2012_1				

Action/Comments					
Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: USACE has started to construct a setback levee in this area and has taken control of this portion of the levee.					

Photo 1 of 1 : FA_2015_RD0900_230_1_20150911_00001.jpg



View of the new setback levee looking downstream during fall 2014 inspection.

LM Start	2.05	Rating **	C	Issue No.	3
LM End	2.11	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2015 USACE Erosion Survey, DRAFT			38.558194 °	38.557717 °
				-121.516859 °	-121.516647 °
DWR ID					

No Photos

Action/Comments					
Inspector Comments: 1997 - Old timber pile dikes remnant approximately 30 ft out into the channel. Oversized levee section. 1999 - Some additional erosion at water line. 2008 - Plans for setback levee repair (along with 57.2) currently in the design phase. 2011 - Setback levee under construction. 2013 - Setback levee is constructed, should be finalized in 2014. 2015: Setback levee complete, site is repaired. [2015 Site ID: SAC_57-0_R]					

* Location	** Rating	+ Issue Type
LS : Land Side WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	

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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	7.70	11/12/2015 11/12/2015	Pavel Kazi

LM Start	2.26	Rating **	A/W	Issue No.	17
LM End	3.72	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.555304 °	38.536946 °
				-121.516127 °	-121.519774 °
DWR ID	DWR_RD0900_01_s_2012_17				
Action/Comments					
Environmental Requirements.					

Photo 1 of 1 : FA_2015_RD0900_230_17_20151113_00022.jpg



View of the DWR environmental mitigation site.

LM Start	2.35	Rating **	M	Issue No.	10
LM End	2.47	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2015 USACE Erosion Survey, DRAFT			38.554277 °	38.552504 °
				-121.515263 °	-121.514752 °
DWR ID					
Action/Comments					
Inspector Comments: 2007 - Have good berm width with minor toe erosion. Close to the levee toe protection, but levee slope is steep. 2011 - New large erosion pocket. 2012 - Minor new erosion at the toe. 2015: No observed changes. [2015 Site ID: SAC_56-7_R]					

Photo 1 of 1 : USACE2013A_SAC_56-7_R_2.jpg



USACE 2013 Photo #1

LM Start	2.55	Rating **	M	Issue No.	9
LM End	2.64	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2015 USACE Erosion Survey, DRAFT			38.551319 °	38.550090 °
				-121.514423 °	-121.513983 °
DWR ID					
Action/Comments					
Inspector Comments: 1997 - Low berm is contributing to erosion. Old timber pile dikes above water parallel to bank. The upstream mitigation low berm causes a flow separation at the site. 1999 - Some new localized erosion with less than one foot of bank retreat. 2000 - Some new erosion at the upstream end. Fat toe deposits at toe. 2003 - Some new erosion upstream, but have a wide berm. 2011 - Minor new erosion at toe. 2015: No observed changes. [2015 Site ID: SAC_56-5_R]					

Photo 1 of 1 : USACE2013A_SAC_56-5_R_1.jpg



USACE 2013 Photo #1

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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Unit No. 01 Sacramento River	Right	7.70	11/12/2015 11/12/2015	Pavel Kazi

LM Start	3.27	Rating **	M	Issue No.	2
LM End	3.48	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2015 USACE Erosion Survey, DRAFT			38.541246 °	38.538689 °
				-121.513561 °	-121.515916 °
DWR ID					
Action/Comments					
Inspector Comments: 2008 - Erosion into levee toe. Over steepened levee slope, worst at the upstream end. 2009 - Near vertical banks from rotational slumping, hidden by vegetation. 2010 - Boat sinking more, may be causing eddy scour around it. Difficult to see the vertical slumps due to dense vegetation. 2011 - Minor new erosion at the toe. The paddleboat that was sitting at this site for years has been removed. 2012 - Site extended upstream due to additional erosion. 2015: No observed changes. [2015 Site ID: SAC_55-7_R]					

Photo 1 of 1 : USACE2013A_SAC_55-7_R_4.jpg



USACE 2013 Photo #1

LM Start	3.41	Rating **	M	Issue No.	4
LM End	3.41	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			38.539770 °	38.539770 °
				-121.515276 °	-121.515276 °
DWR ID	DWR_RD0900_01_s_2014_4				
Action/Comments					
Repair the levee slope damaged by foot traffic and prevent access where possible.					

Photo 1 of 2 : FA_2015_RD0900_230_4_20150911_00002.jpg



Updated picture of the slope instability on the waterside of the levee during fall 2014 inspection

LM Start	3.41	Rating **	M	Issue No.	4 (cont)
LM End	3.41	Issue Type +	Ma	Location *	WS

Photo 2 of 2 : FA_2015_RD0900_230_4_20150911_00003.jpg



A slope instability was found on the waterside slope of the levee looking downstream.

* Location		** Rating		+ Issue Type	
LS : Land Side	N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiency	
WS : Water Side		M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence	
CR : Crown		U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En : Enforcement	

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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	7.70	11/12/2015 11/12/2015	Pavel Kazi

LM Start	4.04	Rating **	M	Issue No.	327
LM End	4.04	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.534759 °	38.534759 °
				-121.524902 °	-121.524902 °
DWR ID	DWR_RD0900_01_s_2012_327				
Action/Comments					
Debris					

Photo 1 of 1 : FA_2015_RD0900_230_327_20150911_00016.jpg



Concrete debris were found on the landside of the levee looking upstream.

LM Start	4.10	Rating **	M	Issue No.	54
LM End	4.10	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.534364 °	38.534364 °
				-121.526051 °	-121.526051 °
DWR ID	DWR_RD0900_01_s_2012_54				
Action/Comments					
Debris					
Inspector Comments: Concrete debris with metal posing a safety risk.					

Photo 1 of 1 : FA_2015_RD0900_230_54_20150911_00012.jpg



View of concrete debris with metal looking upstream.

LM Start	4.95	Rating **	M	Issue No.	330
LM End	4.95	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.524898 °	38.524898 °
				-121.529674 °	-121.529674 °
DWR ID	DWR_RD0900_01_s_2012_330				
Action/Comments					
Debris					

Photo 1 of 1 : FA_2015_RD0900_230_330_20150911_00017.jpg



Concrete anchor was found on the waterside slope of the levee looking upstream.

* Location		** Rating		+ Issue Type	
LS : Land Side	N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiency	
WS : Water Side		M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence	
CR : Crown		U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En : Enforcement	

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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	7.70	11/12/2015 11/12/2015	Pavel Kazi

LM Start	5.37	Rating **	M	Issue No.	18
LM End	5.37	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.520255 °	38.520255 °
				-121.525666 °	-121.525666 °
DWR ID	DWR_RD0900_01_f_2015_18				
Action/Comments					
Debris					

Photo 1 of 1 : FA_2015_RD0900_230_18_20151113_00023.jpg



View of the debris on the waterside slope of the levee looking downstream.

LM Start	5.39	Rating **	M	Issue No.	335
LM End	5.39	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.520022 °	38.520022 °
				-121.525899 °	-121.525899 °
DWR ID	DWR_RD0900_01_s_2012_335				
Action/Comments					
Elderberries are blocking visibility and flood fight capability. Inspector Comments: Elderberries are partially blocking the visibility.					

Photo 1 of 1 : FA_2015_RD0900_230_335_20150911_00019.jpg



View of elderberry bush on the waterside of the levee looking upstream.

LM Start	5.51	Rating **	M	Issue No.	958
LM End	5.51	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.518988 °	38.518988 °
				-121.527738 °	-121.527738 °
DWR ID	DWR_RD0900_01_s_2012_958				
Action/Comments					
Elderberries are blocking visibility and flood fight capability. Inspector Comments: Elderberries are partially blocking the visibility.					

Photo 1 of 1 : FA_2015_RD0900_230_958_20150911_00021.jpg



Elderberry on the landside of the levee. The picture was taken from the crown looking downstream.

* Location		** Rating		+ Issue Type	
LS : Land Side	N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiency	
WS : Water Side		M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence	
CR : Crown		U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En : Enforcement	

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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	7.70	11/12/2015 11/12/2015	Pavel Kazi

LM Start	5.52	Rating **	M	Issue No.	52
LM End	5.52	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.518883 °	38.518883 °
				-121.527800 °	-121.527800 °
DWR ID	DWR_RD0900_01_s _ 2012_52				
Action/Comments					
Elderberries are blocking visibility and flood fight capability. Inspector Comments: Elderberries are partially blocking the visibility.					

No Photos

LM Start	5.95	Rating **	M	Issue No.	25
LM End	5.96	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.517952 °	38.517948 °
				-121.535672 °	-121.535857 °
DWR ID	DWR_RD0900_01_s _ 2012_25				
Action/Comments					
Elderberries are blocking visibility and flood fight capability. Inspector Comments: Elderberries are partially blocking the visibility.					

Photo 1 of 1 : FA_2015_RD0900_230_25_20150911_00009.jpg



Elderberry located on the landside of the levee obstructing the view. The picture was taken from the crown looking downstream.

LM Start	7.10	Rating **	M	Issue No.	343
LM End	7.10	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.512642 °	38.512642 °
				-121.554881 °	-121.554881 °
DWR ID	DWR_RD0900_01_s _ 2012_343				
Action/Comments					
Debris					
Inspector Comments: Concrete debris from old railroad track.					

Photo 1 of 1 : FA_2015_RD0900_230_343_20150911_00020.jpg



Concrete debris from old rail road track was found on the landside of the levee looking upstream.

* Location		** Rating		+ Issue Type	
LS : Land Side	N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiency	
WS : Water Side		M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence	
CR : Crown		U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En : Enforcement	

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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	7.70	11/12/2015 11/12/2015	Pavel Kazi

LM Start	7.21	Rating **	M	Issue No.	8
LM End	7.21	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.511104 °	38.511104 °
				-121.555664 °	-121.555664 °
DWR ID	DWR_RD0900_01_s_2012_8				
Action/Comments					
Elderberries are blocking visibility and flood fight capability. Inspector Comments: Elderberries are partially blocking the visibility.					

Photo 1 of 1 : FA_2015_RD0900_230_8_20150911_00005.jpg



An elderberry bush was found on the landside of the levee looking downstream.

LM Start	7.25	Rating **	M	Issue No.	7
LM End	7.25	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.510613 °	38.510613 °
				-121.555969 °	-121.555969 °
DWR ID	DWR_RD0900_01_s_2012_7				
Action/Comments					
Elderberries are blocking visibility and flood fight capability. Inspector Comments: Elderberries are partially blocking the visibility.					

Photo 1 of 1 : FA_2015_RD0900_230_7_20150911_00004.jpg



View of elderberries on the landward slope looking upstream.

LM Start	7.47	Rating **	M	Issue No.	59
LM End	7.47	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.507648 °	38.507648 °
				-121.557571 °	-121.557571 °
DWR ID	DWR_RD0900_01_f_2012_59				
Action/Comments					
Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Arrundo growth on the waterside slope of the levee.					

Photo 1 of 2 : FA_2015_RD0900_230_59_20150911_00013.jpg



Updated picture of the arundo on the waterside of the levee during spring 2015 inspection.

* Location		** Rating		+ Issue Type	
LS : Land Side N/A : Not Applicable		A : Acceptable		Ma : Maintenance Deficiency	
WS : Water Side		M : Minimally Acceptable		Ob : Design & System Obsolescence	
CR : Crown		U : Unacceptable		En : Enforcement	
		N : Not Inspected/Rated			
		C : Corrected			
		A/W : Acceptable but Monitor & Maintain			

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Unit No. 01 Sacramento River	Right	7.70	11/12/2015 11/12/2015	Pavel Kazi

LM Start	7.47	Rating **	M	Issue No.	59 (cont)
LM End	7.47	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.507648 °	38.507648 °
				-121.557571 °	-121.557571 °
DWR ID	DWR_RD0900_01_f_2012_59				
Action/Comments					
Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Arrundo growth on the waterside slope of the levee.					

Photo 2 of 2 : FA_2015_RD0900_230_59_20150911_00014.jpg



View of arundo on the waterside of the levee during the fall 2014 inspection.

LM Start	7.78	Rating **	M	Issue No.	15
LM End	7.78	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.503490 °	38.503490 °
				-121.559770 °	-121.559770 °
DWR ID	DWR_RD0900_01_f_2013_15				
Action/Comments					
Remove the wild growth other than native grasses from the levee slopes.					
Inspector Comments: Arrundo on the waterside					

Photo 1 of 1 : FA_2015_RD0900_230_15_20150911_00007.jpg



View of arundo on the waterside of the levee looking downstream.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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Reclamation District No. 0900 West Sacramento

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Yolo Bypass	Left	5.26	11/12/2015 11/12/2015	Pavel Kazi

LM Start	0.10	Rating **	A	Issue No.	46
LM End	0.10	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			38.580929 °	38.580929 °
				-121.568259 °	-121.568259 °
DWR ID	DWR_RD0900_02_f_2015_46				
Action/Comments					
Control annual grass and weeds on the levee slopes and easements. Inspector Comments: Acceptable vegetation.					

Photo 1 of 1 : FA_2015_RD0900_231_46_20151113_00008.jpg



View of the acceptable vegetation on the landside slope of the levee.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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